



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,654	12/27/2005	Chitoshi Mochizuki	P/2850-125	6279
2352 7590 08/15/2007 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			EXAMINER KERNS, KEVIN P	
			ART UNIT 1725	PAPER NUMBER
			MAIL DATE 08/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,654	<b>Applicant(s)</b> MOCHIZUKI ET AL.	
	<b>Examiner</b> Kevin P. Kerns	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,6-10 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,6-9 and 21-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to:
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/5/07, 4/9/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 6-9, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (US 5,377,899) in view of Sugikawa (EP 0 867 248).

Hashimoto discloses a method for producing solder that contains additive particles into a brazing solder sheet, in which the method includes the steps of providing two or more types of powders that are not completely alloyed and in a mixed state by mixing the powders in a predetermined proportion by weight to produce the brazing filler (solder) metal composition; and forming the mixed powders into a sheet shape (solder

sheet 3) by powder roll compaction (via rollers) to obtain mixing substantially throughout a cross section of the brazing sheet, such that the powder of the brazing filler metal composition would selectively contain a major component of either nickel, aluminum, or copper as low melting point solder/braze materials, with Cu and Ni powders being specifically disclosed in column 1, lines 39-51 (abstract; column 1, lines 39-59; column 2, lines 6-68; column 3, lines 1-21 and 48-68; column 4, lines 1-68; column 5, lines 1-22; and Figures 2 and 3). Hashimoto does not specifically disclose the step of sintering the powder while it is in the sheet shape.

However, Sugikawa discloses a method of manufacturing a porous metal sheet and a metal sheet manufactured by the method, in which the method includes the steps of providing metal powders P (selected from several elements including Ni, Cu, Al, and Si in column 5, lines 7-11, of which one of ordinary skill in the art would have selected as obvious choices in the mixing step) on a feeding belt that travels through a pair of rolling rollers, resulting in a metal sheet 10; and sintering the metal sheet 10 through a sintering oven 4 to integrate the metal powders to each other, thus forming the porous metal sheet having fine pores, with the step of sintering the powder while it is in the sheet shape being advantageous for integrating the metal powders to each other so as to form a porous metal sheet having fine pores (abstract; column 1, lines 7-18; column 3, line 56 through column 5, line 46; column 7, lines 33-55; column 12, line 41 through column 13, line 14; First Embodiment; and Figures 1 and 3-6).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the method for producing solder that contains

additive particles into a solder sheet, as disclosed by Hashimoto, by using the step of sintering the powder while it is in the sheet shape, as taught by Sugikawa, in order to integrate the metal powders to each other so as to form a porous metal sheet having fine pores (Sugikawa; abstract).

It is the examiner's position that the brazing sheet of Hashimoto in view of Sugikawa is identical to or only slightly different than the claimed alloy article prepared by the method of the claim(s), because both brazing sheets include similar powder compositions. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Hashimoto in view of Sugikawa strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the teachings of Hashimoto in view of Sugikawa.

***Allowable Subject Matter***

4. Claims 10 and 20 remain allowed.

***Response to Arguments***

5. The examiner acknowledges the applicants' amendment received by the USPTO on April 9, 2007. In addition, two Information Disclosure Statements (IDS's) were received on March 5, 2007 and April 9, 2007. These IDS's have been considered, initialed, and copies are provided with this Office Action. All of the previous prior art rejections based on Dockus et al., Iwai, and Nakamura et al. have been withdrawn due to amendments and/or arguments. Allowable subject matter remains for claims 10 and 20, but has been withdrawn for claim 21 in view of the new grounds of rejection. Claims 4, 11, and 14-19 have been cancelled. The applicants have added new claims 24-29. Claims 1, 6-10, and 21-29 are currently under consideration in the application.

6. Applicants' arguments with respect to claims 1, 6-9, and 21-29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns 8/14/07*  
Primary Examiner  
Art Unit 1725

KPK

kpk

August 14, 2007